# 7th International Conference on Data Science and Machine Learning Applications

Artificial Intelligence Meets Saudi Vision 2030

March 1-3, 2022. Riyadh, Saudi Arabia

**Conference Program**

## Tutorials Day - Tuesday 01st March 2022

| Time | | Session | Presenter | Title | Location | |
|------|------|---------|-----------|-------|----------|---|
| From | To | | | | | |
| 08:30 | 09:30 | Registration | | | | |
| 09:30 | 12:30 | Tutorial I | Mr. Eyad Sibai | Machine Learning Pipelines Using Scikit-learn and Pandas | 1-A19 [Men] (Building 105) | 1-A21 [Women] (Building 105) |
| 12:30 | 01:30 | | | | | |
| 01:30 | 04:30 | Tutorial II | Dr. Issam H. Laradji | Build End-to-End Deep Learning Projects and Manage Large-Scale Experiments | 1-A19 [Men] (Building 105) | 1-A21 [Women] (Building 105) |

## Wednesday 02nd March 2022

| Time | | Session | Presenter | Title | Location | |
|---|---|---|---|---|---|---|
| From | To | | | | | |
| 08:00 | 08:30 | Registration + Coffee | | | Zone B Entrance (Building 105) | |
| **Opening Session** | | | | | | |
| 08:30 | 08:40 | Opening I | Quran Reciter | Quran Recitation | **Main Auditorium (Building 105)** | Mr. Ian Rennie (Master of Ceremony) |
| 08:40 | 08:50 | Opening II | Dr. Ahmed Al Yamani | Conference Opening Speech | **Main Auditorium (Building 105)** | Mr. Ian Rennie (Master of Ceremony) |
| 09:00 | 09:30 | Distinguished Speaker | Dr. Majid Altwaijri | The Potential Impact of Data Science and AI Applications Across Economic Sectors | **Main Auditorium (Building 105)** | Mr. Ian Rennie (Master of Ceremony) |
| **Short Interval** | | | | | | |
| **Keynote Speech** | | | | | | |
| 09:40 | 10:40 | Keynote Speech I | Dr. Hasan Sawaf | Authority in AI Science | **Main Auditorium (Building 105)** | Dr. Lahouari Ghouti [Coordinator] |
| **Panel** | | | | | | |
| 10:50 | 11:50 | Panel Discussion I | Dr. Ibrahim Almosallam Dr. Nora Alrajebah Dr. Mohammad Alshahrani Dr. Mashaan Alshammari Engr. Salem Gharbi | Artificial Intelligence: Potentials, Challenges and Ethics | **Main Auditorium (Building 105)** | Dr. Sakhar Alkhereyf [Organizer/Moderator] |
| **Poster Session** | | | | | | |
| 11:50 | 12:30 | Poster Session | Salma Kulsoom, Seemab Latif, Tanzila Saba and Rabia Latif | Students Personality Assessment using Deep Learning from University Admission Statement of Purpose | **Faculty Lounge (Building 105)** | Dr. Wadii Boulila |
| 11:50 | 12:30 | Poster Session | Wajdi Aljedaani, Mohamed Wiem Mkaouer, Stephanie Ludi and Yasir Javed | Automatic Classification of Accessibility User Reviews in Android Apps | **Faculty Lounge (Building 105)** | Dr. Wadii Boulila |
| 11:50 | 12:30 | Poster Session | Patil Malini and Basit Qureshi | A Particle Swarm Optimization based LSTM Neural Network for Temperature Forecasting | **Faculty Lounge (Building 105)** | Dr. Wadii Boulila |

| 11:50 | 12:30 | Poster Session | Rafi Ud Daula Refat, Abdulrahman Abu Elkhail and Hafiz Malik | A Lightweight Intrusion Detection System for CAN Protocol Using Neighborhood Similarity | **Faculty Lounge (Building 105)** | Dr. Wadii Boulila |
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| 11:50 | 12:30 | Poster Session | Malak Aljabri and Samiha Mirza | Phishing Attacks Detection using Machine Learning and Deep Learning Models | **Faculty Lounge (Building 105)** | Dr. Wadii Boulila |
| 11:50 | 12:30 | Poster Session | Jothi G, Ahmad Taher Azar, Basit Qureshi and Nashwa Ahmad Kamal | iReader: An Intelligent Reader System for the Visually Impaired | **Faculty Lounge (Building 105)** | Dr. Wadii Boulila |
| 11:50 | 12:30 | Poster Session | Galal Binmakhashen, Adnan Bakather and Ali Abdulqader Bin-Salem | An Investigation of Forecasting Tadawul All Share Index (TASI) Using Machine Learning | **Faculty Lounge (Building 105)** | Dr. Wadii Boulila |
| 11:50 | 12:30 | Poster Session | Abdullatif Al-Najim, Abrar Al-Amoudi, Kenji Ooishi and M Al-Nasser | Intelligent Maintenance Recommender System | **Faculty Lounge (Building 105)** | Dr. Wadii Boulila |
| 12:00 | 13:30 | **Prayer and Lunch Break (Atrium – Building 104)** | | | | |
| | | **Keynote Speech** | | | | |
| | | **1: Deep Learning Session (1) / Parallel** | | | | |
| 13:30 | 13:50 | Session 1: Deep Learning I | Ali Hassani and Hafiz Malik | Efficient Face-Swap-Verification Using PRNU | **Lecture Hall 2-C02 (Building 105)** | Prof. Ahmad Azar |
| 13:50 | 14:10 | Session 1: Deep Learning I | Nesrine Mansouri, Makram Soui, Ibrahim Alhassan and Mourad Abed | TextBlob and BiLSTM for Sentiment analysis toward COVID-19 vaccines | **Lecture Hall 2-C02 (Building 105)** | Prof. Ahmad Azar |
| 14:10 | 14:30 | Session 1: Deep Learning I | Khattab Ali, Abdulkareem Alzahrani, Najmaddin Khoshnaw and Duaa Al Dosary | Intelligent Deep Detection for Malicious Tamper Cancer | **Lecture Hall 2-C02 (Building 105)** | Prof. Ahmad Azar |
| 14:30 | 14:50 | Session 1: Deep Learning I | Nouha Alsaleh, Nashwa Alzahrani, Yara Alshehri, Maha Alhobishi, Naimah Alaqeel and Dina Alabad | A Robot-based Arabic Sign Language Translating System | **Lecture Hall 2-C02 (Building 105)** | Prof. Ahmad Azar |

| 14:50 | 15:10 | Session 1: Deep Learning I | Atheer Algherairy, Wadha Almattar, Eman Bakri and Salma Albelali | The Impact of Feature Selection on Different Machine Learning Models for Breast Cancer Classification | **Lecture Hall 2-C02 (Building 105)** | Prof. Ahmad Azar |
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| 15:10 | 15:30 | Session 1: Deep Learning I | Haneen Alokasi and Muhammad Bilal Ahmad | The Accuracy Performance of Semantic Segmentation Network with Different Backbones | **Lecture Hall 2-C02 (Building 105)** | Prof. Ahmad Azar |
| 15:30 | 16:00 | **Asr Prayer + Coffee Break** | | | | |
| 16:00 | 18:30 | **Break and Relax Period** | | | | |

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| 2: Online Presentations Session (1) / Parallel | | | | | | |
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| 13:30 | 13:50 | Session 2 | Intisar Almuslim and Diana Inkpen | Legal Judgment Prediction for Canadian Appeal Cases | **Lab 1A-19 (Building 105)** | Dr. Mohammed Zarour |
| 13:50 | 14:10 | Session 2 | Asma Yamani and Rabeah Alzaidy | Denoising Electromagnetic Surveys Using LSTMs | **Lab 1A-19 (Building 105)** | Dr. Mohammed Zarour |
| 14:10 | 14:30 | Session 2 | Ang Xuan, Mengmeng Yin, Yupei Li, Xiyu Chen and Zhenliang Ma | A comprehensive evaluation of statistical, machine learning and deep learning models for time series prediction | **Lab 1A-19 (Building 105)** | Dr. Mohammed Zarour |
| 14:30 | 14:50 | Session 2 | Rafia Akhter and Fred R. Beyette | Machine Learning Algorithms for Detection of Noisy/Artifact-Corrupted Epochs of Visual Oddball Paradigm ERP Data | **Lab 1A-19 (Building 105)** | Dr. Mohammed Zarour |
| 14:50 | 15:10 | Session 2 | Fouad Trad and Salah El Falou | Towards Using Deep Reinforcement Learning for Better COVID-19 Vaccine Distribution Strategies | **Lab 1A-19 (Building 105)** | Dr. Mohammed Zarour |
| 15:10 | 15:30 | Session 2 | Galal Binmakhashen and Hamdi Al-Jamimi | Evaluation of Machine Learning to Early Detection of Highly Cited Papers | **Lab 1A-19 (Building 105)** | Dr. Mohammed Zarour |
| 15:30 | 15:45 | **Asr Prayer + Coffee Break** | | | | |
| 15:50 | 16:10 | Session 2 | Niddal Imam, Vasileios Vasilakis and Dimitris Kolovos | An Empirical Analysis of Health-Related Campaigns on Twitter Arabic Hashtags | **Lab 1A-19 (Building 105)** | Dr.Bilel Benjdira |

| 16:10 | 16:30 | Session 2 | Syed Abdul Rehman Khan, Muhammad Umar, Muhammad Tanveer, Zhang Yu and Laeeq Razzak Janjua | Business Data Analytic and Digital Marketing: Business Strategies in the Era of COVID-19 | **Lab 1A-19 (Building 105)** | Dr.Bilel Benjdira |
|-------|-------|-----------|------|------|------|------|
| 16:30 | 16:50 | Session 2 | Naghmeh Mahmoodian, Harshita Thadesar, Marilena Georgiades, Maciej Pech and Christoph Hoeschen | Liver Texture Classification on CT Images of Microwave Ablation Therapy | **Lab 1A-19 (Building 105)** | Dr.Bilel Benjdira |
| 16:50 | 17:10 | Session 2 | Tansel Özyer and Reda Alhajj | A Multi-Modal Emotion Recognition System Based on CNN-Transformer Deep Learning Technique | **Lab 1A-19 (Building 105)** | Dr.Bilel Benjdira |

| **Keynote speech** | | | | | | |
|-------|-------|-----------|------|------|------|------|
| 18:30 | 19:30 | Keynote Speech II (**Online**) | Dr. Gilbert Strang | Linear Algebra and Deep Learning: Connections and Insights (**Online**) | CDMA2022 Youtube Channel | Dr. Lahouari Ghouti [Coordinator] |

# Thursday 03rd March 2022

| Time | | Session | Presenter | Title | Location | Session Chair |
|---|---|---|---|---|---|---|
| From | To | | | | | |
| 08:15 | 08:55 | Registration + Coffee | | | Zone B Entrance (Building 105) | |
| **Keynote speech** | | | | | | |
| 09:00 | 10:00 | Keynote Speech III | Prof. Nizar Habash (**Online**) | Arabic Natural Language Processing: Challenges, Solutions and Outlook | **Main Auditorium (Building 105)** | Dr. Lahouari Ghouti [Coordinator] |
| **Keynote speech** | | | | | | |
| 10:00 | 11:00 | Keynote Speech IV | Prof. Hafiz Malik | Securing Biometric Systems against Deepfake and Shallowfake Attacks | **Main Auditorium (Building 105)** | Dr. Lahouari Ghouti [Coordinator] |
| **Panel** | | | | | | |
| 11:00 | 12:00 | Panel Discussion II | Dr. Maha Al-Harthi Dr. Alia Bahanshal Dr. Areeb Alowisheq Dr. Hussein Al-Salman Dr. Motaz Alfarraj | Enabling Education and Research in Artificial Intelligence: Reality vs. Hypes | **Main Auditorium (Building 105)** | Dr. Sakhar Alkhereyf [Organizer/Moderator] |
| **3: Machine Learning Session (2) / Parallel** | | | | | | |
| **Parallel Session** | | | | | | **Session Chair** |
| 10:00 | 10:20 | Session 3: Machine Learning | Lama Al-Bakhat and Sultan Almuhammadi | Intrusion Detection on QUIC Traffic: A Machine Learning Approach | **Lecture Hall 2-C02 (Building 105)** | Dr. Adel Ammar |
| 10:20 | 10:40 | Session 3: Machine Learning | Leina Abouhagar, Amal Alazba, Randah Al-Harbi, Hamdi Al-Jamimi, Abdullah Sultan and Rabeah Al-Zaidy | Detection of research trends using dynamic topic modeling | **Lecture Hall 2-C02 (Building 105)** | Dr. Adel Ammar |
| 10:40 | 11:00 | Session 3: Machine Learning | Sarah Alghamdi and Sultan Almuhammadi | On the Capabilities of Quantum Machine Learning | **Lecture Hall 2-C02 (Building 105)** | Dr. Adel Ammar |

| 11:00 | 11:20 | Session 3: Machine Learning | Basem Assiri, Mohammed Bashraheel and Ala Alsuri | Improve the Accuracy of Students Admission at Universities Using Machine Learning Techniques | **Lecture Hall 2-C02 (Building 105)** | Dr. Adel Ammar |
|---|---|---|---|---|---|---|
| 11:20 | 11:40 | Session 3: Machine Learning | Asif Hassan Syed and Tabrej Khan | A Supervised Multi-tree XGBoost Model for an Earlier COVID-19 Diagnosis Based on Clinical Symptoms | **Lecture Hall 2-C02 (Building 105)** | Dr. Adel Ammar |
| 11:40 | 12:00 | Session 3: Machine Learning | Amal Algefes, Nouf Aldossari and Fatma Masmoudi | A Text-mining approach for crime tweets in Saudi Arabia: From analysis to prediction | **Lecture Hall 2-C02 (Building 105)** | Dr. Adel Ammar |
| 12:00 | 12:20 | Session 3: Machine Learning | Sunday Olatunji, Aisha Alansari, Heba Alkhorasani, Meelaf Alsubaii, Rasha Sakloua, Reem Alzahrani, Yasmeen Alsaleem, Reem Alassaf, Mehwash Farooqui and Mohammed Imran Basheer Ahmed | Machine Learning Based Preemptive Diagnosis of Lung Cancer Using Clinical Data | **Lecture Hall 2-C02 (Building 105)** | Dr. Adel Ammar |
| 12:30 | 13:30 | **Prayer and Lunch Break (Exam Hall 2 – Building 105)** | | | | |

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| **4: Online Presentations Session (2) / Parallel** | | | | | | |
|---|---|---|---|---|---|---|
| 10:00 | 10:20 | Session 4 | Saif Kazi, Priyesh Vakharia, Parth Shah, Riya Gupta, Yash Tailor, Palak Mantry and Jash Rathod | Preprocessy: A Customisable Data Preprocessing Framework with High-Level APIs | **Lab 1A19 (Building 105)** | Dr. Mohamed Tounsi |
| 10:20 | 10:40 | Session 4 | Gourango Modak, Shuvra Smaran Das, Md. Ajharul Islam Miraj and Md. Kishor Morol | A Deep Learning Framework to Reconstruct Face under Mask | **Lab 1A19 (Building 105)** | Dr. Mohamed Tounsi |

| 10:40 | 11:00 | Session 4 | Belal Mahmud Fahim, Md. Sadek Rayhan Mahi, Sadia Islam, Mahdi Hasan Shuvo and Md. Kishor Morol | A comparative analysis of Graph Neural Networks and commonly used machine learning algorithms on fake news detection | **Lab 1A19 (Building 105)** | Dr. Mohamed Tounsi |
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| 11:00 | 11:20 | Session 4 | Shahriar Rumi Dipto, Priata Nowshin, Intesur Ahmed, Deboraj Chowdhury Amitabha Chakrabarty, Muhammad Tahmeed Abdullah and M Rahman | One Voice is All You Need: A One-Shot Approach to Recognize Your Voice | **Lab 1A19 (Building 105)** | Dr. Mohamed Tounsi |
| 11:20 | 11:40 | Session 4 | Zainab Alsharif, Salma Elhag and Sulhi Alfakeh | Depression Detection in Arabic Using Speech Language Recognition | **Lab 1A19 (Building 105)** | Dr. Mohamed Tounsi |
| 11:40 | 12:00 | Session 4 | Asad Ullah, Tufail Muhammad, Wajid Ullah Khan, Syed Irfan Ullah, Abdul Salam | Deep Learning for Classifying of White Blood Cancer | **Lab 1A19 (Building 105)** | Dr. Mohamed Tounsi |
| 12:00 | 12:20 | Session 4 | Pablo Adames, Sourabh Mokhasi, Yves Pauchard, Mohammed Moshirpour and Camilo Rostoker | Improving Relevance in a Recommendation System to Suggest Charities without Explicit User Profiles Using Dual Auto-Encoders | **Lab 1A19 (Building 105)** | Dr. Mohamed Tounsi |
| 12:30 | 13:30 | **Prayer and Lunch Break (Atrium – Building 104)** | | | | |

| | | | **Keynote Speech** | | | |
|---|---|---|---|---|---|---|
| 13:30 | 14:30 | Keynote Speech VI | Dr. Kareem Darwish | Computer Science Meets Social Sciences: Stance Detection from Supervised to Unsupervised Learning | **Main Auditorium (Building 105)** | Dr. Lahouari Ghouti [Coordinator] |
| | | **Closing Speech (Main Auditorium - Building 105)** | | | | |
| 14:30 | 14:45 | Closing Remarks by Conference Chairs | | | | |